NOTES AND NEWS.

SOME SEVENTY SPECIES of lichens from Florida collected by W. W. Calkins, and mostly determined by H. Willey, are enumerated in the *Journal of Mycology* for October.

DR. BYRON D. HALSTED will spend the winter months in the neighborhood of Los Angeles, California. He will remain there from the middle of November to the middle of February.

A CRITICAL STUDY and revision of the Hysterineæ in the Duby Herbarium, by Dr. Rehm, is begun in the fourth heft of *Hedwigia*, and will prove of interest to systematic mycologists.

IN THE *Bulletin of the Torrey Botanical Club* for October, Dr. N. L. Britton distinguishes two forms of what has been called Anychia dichotoma, and restores Decandolle's A. capillacea to specific rank.

A HANDBOOK of the cryptogamia is being prepared by Alfred W. Bennett (6 Park Village East, London, N. W., England), who desires that authors will send him copies of their recent articles pertaining to this subject.

CARL OSCAR HAMNSTRÖM died at Hessleholm, Sweden, on July 5 of this year, at the age of 70. We learn from the *Botaniska Notiser* that his chief botanical works comprise studies of parts of the Swedish flora, published between 1842 and 1851.

IN THE OCTOBER *Journal of Botany* Baron F. von Mueller describes a new genus of Vacciniaceæ from New Guinea, naming it Catanthera. Its salient characters are petals perfectly separated and anthers continuously completely bent downward.

AN ERINEUM on the flowers of cultivated grapes is recorded by J. E. Planchon in the last *Revue Mycologique*, as being found in two localities in France. Erineum usually appears on the upper surface of leaves, and has probably never before been found on the flowers.

IN *Nature*, for September 30, is printed a charming lecture by H. Marshall Ward, on the subject of roots. In popular language he gives an idea of the activities of the root, and shows what complex conditions are at work, influencing the life of the whole plant. Special attention is paid to the oxygen supply.

NOTES ON TOMATOES, by Prof. L. H. Bailey, Jr., occupy Michigan Agricultural College Bulletin No. 19. Seventy-six seedsman's varieties were grown the past year, and a critical synopsis prepared in which the number of names is reduced nearly one half. Remarks upon their earliness, productiveness, amount of rot, and germination are given.

THE COMMON YARROW (Achillea Millefolium) is observed by Rev. G. Henslow, before the Royal Horticultural Society of England, to be gyno-diœcious. The female florets have abortive anthers without pollen. They also differ from the hermaphrodite florets by sometimes having fewer petals and stamens, slightly longer ovaries, and the corresponding tubes slightly shorter.

THE ANATOMY and development of Agarum Turneri, the sea colander, by Mr. J. E. Humphrey, forms the fifth contribution from the cryptogamic laboratory of Harvard University. The frond was the part studied. It agrees closely in structure with that of other Laminariaceæ. The interest centers in the manner of forming the perforations, which is well described and illustrated.

MR. G. H. PARKER furnishes the sixth contribution from the cryptogamic laboratory of Harvard University, on the morphology of Ravenelia glandulæformis. Our knowledge of this odd member of the Uredineæ has been very incomplete. The paper shows that each head of teleutospores, from its earliest development, is a group of adnate pedicelled spores. The other species and the literature of the genus are reviewed.

A SKETCH of the life of C. C. Frost of Vermont, who died in 1880, is given in the October *Journal of Mycology*. It is from the pen of Prof. Wm. R. Dudley, after a visit to Mr. Frost's late residence, and is an interesting account of a modest and retiring botanist. Mr. Frost's chief work, done conjointly with Prof. Tuckermann, was a Catalogue of Plants of Amherst, in which he described sixty species of fungi, mostly of the fleshy sorts.

PROF. CHARLES R. BARNES has published, as one of the bulletins of Purdue University, an analytic key to the genera of mosses, recognized in Lesquereux and James's manual of the mosses of North America. As is well known to those attempting to use the manual referred to the analytical key to genera is anything but satisfactory. Professor Barnes has attempted to supply this need and to lessen the difficulties in the way of students of mosses. Copies can be had on application to Purdue University.

THE VERY INTERESTING presidential address of Professor Carruthers, before the biological section of the British Association, on the age of some existing species of plants, is published in full in the *Journal of Botany* for October. Comparing the species of mummy plants and those of recent geological deposits with their living representatives the conclusion reached is that the data given must be considered "as confirming the long-established axiom that by us, at least, as workers, species must be dealt with as fixed quantities."

IN COLLECTING marine algæ for microscopic study, members of the Quekett Microscopical Club have found it convenient and satisfactory to carry a bottle of good glycerine, and as the material is gathered wash well in sea water and drop it into the bottle. Enough specimens must not be put into a bottle to thin the glycerine too much with sea water. Such material can afterward be mounted in glycerine jelly. Some kinds, like Polysiphonia and its allies, are not well preserved in this manner, and for such a saturated salt solution should be used.

MR. JAMES BRITTEN is doing some good work in the matter of raising questions concerning the priority of certain generic names. He has given in the last *Journal of Botany* a paper on the nomenclature of some Proteaceæ, in which the rights of Salisbury are put forward and rather severe strictures passed upon some distinguished botanists. As to the merits of the case we have nothing to say, but if priority is to be a law at all, and if its sole object is to be fixity of names, the sooner all questions of priority are settled the better: and they must be settled in spite of sentiment, or fitness, or universality, for short of absolute priority there is no fixity.

THE BOTANICAL PAPERS read before the Birmingham meeting of the British Association are as follows: Initiation of a discussion upon the value of the "type-system" in the teaching of botany, Prof. Bayley Balfour; On the germination of the spores of Phytophthora infestans, Prof. Marshall Ward; On the flora of Ceylon, especially as affected by climate, Henry Trimen; On Humboldtia laurifolia as a myrmecophilous plant, Prof. Bower; Note on the floral symmetry of the genus Cypripedium, Dr. Maxwell T. Masters; Bugio, the biological relations of an Atlantic rock, Michael C. Grabham; The multiplication and vitality of certain micro-organisms, Percy F. Frankland.

SOME INTERESTING FUNGI from phosphate caverns of Quercy, France, 500 feet below the surface, collected by M. Marty, are described by M. Roumeguère in the last *Revue Mycologique*. These include two species of Agaricus, one of Coprinus, two of Stereum, two of Telephora, and a diminutive Genea. The most interesting one is the Coprinus, C. subterraneus, n. sp., which hung pendent from the ceiling of the cave by thousands. The filiform stipes, a foot or more long, much twisted and often branched, were inflated to an inch in diameter at the base while the other end was recurved, and supported the grayish brown pileus in an upright position. When lighted by the lamps of the explorers the roof scintillated with the reflections from the moist pilei.

THE STRUCTURE of the diatom valve is the chief subject considered in the last number of the *Journal of the Quekett Micr. Society*. The paper by Mr. Deby is of special interest as the author has based his conclusions upon a study of untreated valves from living diatoms, supplemented by those treated with reagents, and by fossil forms. He finds that the valve may (for convenience of elucidation) be said to consist of three layers, an outer continuous one, which is thin, rarely silicified, and readily dissolved by acids, a thicker inner one, also continuous, but silicified, and an intermediate wall of silica completely perforated, giving the valve its appearance of areolation. This view, as elaborated by the author, seems more in accord with our knowledge of the structure of other vegetable cells than those of the well known diatomists, Müller, Van Ermengem, Flogel, Cox and Van Heurck.

A. ERNST, of Caracas, in *Nature* of October 7, gives an account of what he considers to be a new case of parthenogenesis in the vegetable kingdom. It is a menispermaceous plant, described by Eichler as *Disciphania Ernstii*, a very rare genus, containing but one other species. Strictly dioecious, Ernst has cultivated it carefully and found that his female plants "produced in three successive years an increasing number of fertile fruits without the operation of any fertilizing pollen from a male flower." He also attempted to discover whether, as in the case of Cœlebogyne, the embryo is developed as an outgrowth from a cell of the nucellus, but discarded the idea on the ground that that process is connected with polyembryony, and there is no such thing in Disciphania, a conclusion which, by the way, may be somewhat hasty. Hence the claim is that this furnishes a case of the development of an unfertilized oosphere. Of course the strength of food-supply is considered in this connection, and altogether it is a matter well worth looking into.